



The Raleigh Amateur Radio Society's **EXCITER**

GET INVOLVED

- RARS General Membership meeting: Second Tuesday of the month.
- The RARS net meets every night except Saturday @ 8 p.m. on 146.640.
- The RARS Technical & Trader's net: Saturdays @ 8:00 PM on 146.64.
- ~~RARS meets for a monthly dinner on the First Tuesday of each month.~~



PUBLIC SERVICE EVENTS

Interested in helping? Visit
<https://www.rars.org/public-service.php>

frequently for our 2020
ham public service
schedule.

RARS General Meeting

Main Topics: Officers induction &
Heil Sound.

Presenter: Election committee &
Bob Heil, K9EID

Date: December 8, 2020

Time: Meeting at 7:30 PM, informal
gathering at 7PM on Zoom.

RARS Net Monthly Summary

November 2020

RARS Net Summary

Checkins: 681

Minutes: 1349

Sessions: 31

Virginia Enzor NC4VA
RARS Net Manager

RARS Officers

PRESIDENT

John Honeycutt
N8ZU
919.417.2477
jfh49@bellsouth.net

VICE PRESIDENT

Tom Lewis
N4TL
N4TL2@yahoo.com

SECRETARY

Mark Kilmer
KM4JRH
919.676.0110
mark.kilmer@gmail.com

TREASURER

Greg Seamster
KE4PAX
919.859.0029
KE4PAX@arrl.net



The Raleigh Amateur Radio Society

The Raleigh Amateur Radio Society, Inc. (RARS) was founded in 1969 and continues to serve and support the amateur radio community in the greater Triangle area. In 1999, the society incorporated a new RARS and obtained 501(c)(3) non-profit tax status.

The objectives of the club are to promote worldwide friendship through amateur radio; to be of public service by providing radio communications in times of disaster, emergency, or civic needs; to educate members in radio technique, and to provide training classes to assist in obtaining amateur radio licenses.

Anyone interested in amateur radio is eligible to apply for membership. Dues for regular licensed amateurs are \$18 per year (from July 1 through June 30). Additional immediate family members pay \$5 each per year. Dues for licensed amateurs older than 59 or younger than 16 are \$12 per year. Dues for non-licensed associate members are \$9 per year. Applications for membership may be obtained from the treasurer or on the RARS website.

<https://www.rars.org>

Exciter

The Exciter is the official newsletter of the Raleigh Amateur Radio Society. It appears each month as a PDF on the RARS website at www.rars.org. Members receive email notification when the latest version is available. Please provide your email address to the Treasurer.

The Exciter welcomes articles, advertisements, and other contributions. To submit a piece to the newsletter, please contact the Editor. The Editor reserves the right to edit any and all pieces. The submission deadline for each month's Exciter is the Saturday that is ten days before the general meeting. All submissions must be final. Drafts are not accepted.

The views expressed in the Exciter are those of the individual authors and do not necessarily reflect the views of the Editor or RARS.

Tom Lewis, N4TL, editor (editor@rars.org)

October 13, 2020 RARS meeting

RARS October Show and Tell

Here is an item I forgot to put in last month's Exciter. My apologies to Mark, KM4JRH.



Mark Kilmer, KM4JRH, HP 302A Audio Wave Analyzer, 1959.

What does it do?

Measures the amplitude and frequency of individual components of complex waveforms; a waveform that contains multiple components such as harmonics, spurious signals, etc. It has sometimes been called a variable voltmeter. It has a bandwidth of 20Hz to 50Khz. It was kind of a predecessor to the modern spectrum analyzer. But it uses tunable oscillators and an meter instead of a fancy display. Here is a link to the HP Memory Project.

<http://hpmemoryproject.org/index.htm#>

November 10, 2020 RARS meeting

President John Honeycutt, N8ZU, ran the formal part of the meeting. See the meeting minutes on page [twenty](#) for details. After the meeting John, N8ZU, and Tom, N4TL, met with Jeff, AC4ZO, and Virginia, NC4VA, to present their special lifetime Membership plaques.



President John Honeycutt, N8ZU, presenting the Special Lifetime Membership plaque to Jeff Wittich, AC4ZO.



President John Honeycutt, N8ZU, presenting the Special Lifetime Membership plaque to Virginia Enzor, NC4VA.

November 10, 2020 RARS meeting, continued

2021 Nominations Committee Report/Recommendations

RARS Officers for a two year Term:

Vice President: Tom Lewis, N4TL

Treasurer: Greg Seamster, KE4PAX

Board Members for 1-year term:

Public Service Director:	Jeremy Lindsley, KD4JDL
Public Information Officer:	Postponed
RARS Exciter Editor:	Tom Lewis, N4TL
RARSfest 2021 Chairperson:	Postponed
RARS Net Manager:	Julia Royster, KT4JR
Director at Large	Alan Pitegoff, AB4OZ
Director at Large	Tadd Tolberg, KA2DEW
Director at Large	Ken Latchum, AD4GX
FM Repeater Chair:	Chuck DeCourt, W3WZN
W4DW, W4RNC, N4RAL Trustee:	Jeff Wittich, AC4ZO
ARRL Liaison:	Chuck Littlewood, K4HF
RARS Education Director:	Carl Davis, W8WZ
RARS Youth Director:	Brantley West, K4CBW
RARS Web Master:	Hank Montgomery, K4HM
RARS Food Service Chair:	Richard Kroeger, N1FUA
RARS NC QSO Party Chair:	Marty Young, W4MY
RARS 2021 Field Day Chair:	Curt Phillips, W4CP
RARS Volunteer Exam Coordinators	Liz, K04CK & Joe White, WA4GIR

Submitted by Chuck Littlewood, K4HF
Nominating Committee Chair

November 10, 2020 RARS meeting, continued

Tom, N4TL, introduced Jay Diepenbrock, KM4EP. Jay gave a presentation about the IEEE MOVE truck: a mobile Communications & Power platform for disaster response.

<https://move.ieeeusa.org/>



Jay Diepenbrock, KM4EP

MOVE General Description

- The Institute of Electrical and Electronics Engineers (IEEE) is the largest professional society in the world with over 421,000 members worldwide. Our tag line is "Advancing Technology for Humanity"
- The IEEE has created a special disaster response vehicle and team called MOVE –

Mobile
Outreach using
Volunteer
Engagement

to address communications and power needs in the initial response to disasters

- Piloted in the US, MOVE is hoping to expand to other disaster prone areas

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Screen captures during the Zoom meeting

<https://www.rars.org>

MOVE Objectives

Objectives

- Provide vital services to emergency responders & public in the early phase of a disaster
 - **Deployed as National Red Cross Partner, collaborating with Red Cross Disaster Services Technology team**
 - **Independent off-grid setup where power and/or Internet are not available**
 - **Set up power, IP Phones, Internet access within 10 minutes of arrival for use by the Red Cross and/or public**
 - When not deployed, provides platform for **STEM*** Education and Public Visibility events
- * STEM = Science, Technology, Engineering, and Math

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Goals

Provide communications, energy, light & information to disaster survivors

- Give comfort to survivors
- Provide communication, energy, information & light to disaster victims
- Educational outreach to STEM students & Public
- Engage Members through project involvement utilizing their technical skills
- Share results widely, adapt to other regions
- Build **trained** volunteer communities
- Promote IEEE



Screen captures during the Zoom meeting

November 10, 2020 RARS meeting, continued

Front console

- Tablet for Electronic logging
- LTE Router, for cell network-based Internet access while driving
- (not shown) First Net tablet
- Storage



- Speakers for amateur, CB
- Raspberry pi for monitoring truck systems
- Kenwood TM-D710G dual band 2 m/70 cm amateur
- Uniden CB/scanner/PA
- Power control switches

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IEEE Nov 2020



National American Red Cross Partner



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Screen captures during the Zoom meeting

November 10, 2020 RARS meeting, continued

MOVE Disaster Deployments

Brief History

- Truck delivered to IEEE March 2016, based in North Carolina, USA
- Deployed by Red Cross to 19 disaster deployments:
 - 2016 - West Virginia flooding
 - 2016 - Louisiana flooding
 - 2016 - Hurricane Hermine NC
 - 2016 - Hurricane Matthew
 - 2016 - Gatlinburg, TN wildfires
 - 2017 - Missouri Flooding
 - 2017 - Solar Eclipse
 - 2017 - Hurricane Harvey (TX)
 - 2017 - Hurricane Irma (FL)
 - 2018 - Hurricane Florence
 - 2018 - Hurricane Michael
 - 2019 - Hurricane Berry
 - 2019 - Alabama Tornadoes
 - 2019 - Hurricane Dorian
 - 2020 - Tennessee Tornado
 - 2020 - Hurricane Isaias (NC)
 - 2020 - Hurricane Laura (LA)
 - 2020 - Hurricane Sally (LA/AL)
 - 2020 - Hurricane Delta
- Public Visibility events (examples, many not listed)
 - 2016-2018 IEEE Southeastcon Conferences
 - 2017, 2018 Atlanta Science Festival (> 25,000 attendees)
 - 2017 National Boy Scout Jamboree (WV)
 - Typical > 50,000 people reached each year



Contact

For more information, go to:

<http://move.ieeeusa.org/>

or contact

Mary Ellen Randall (MOVE Program Director)

merandall@ieee.org

or

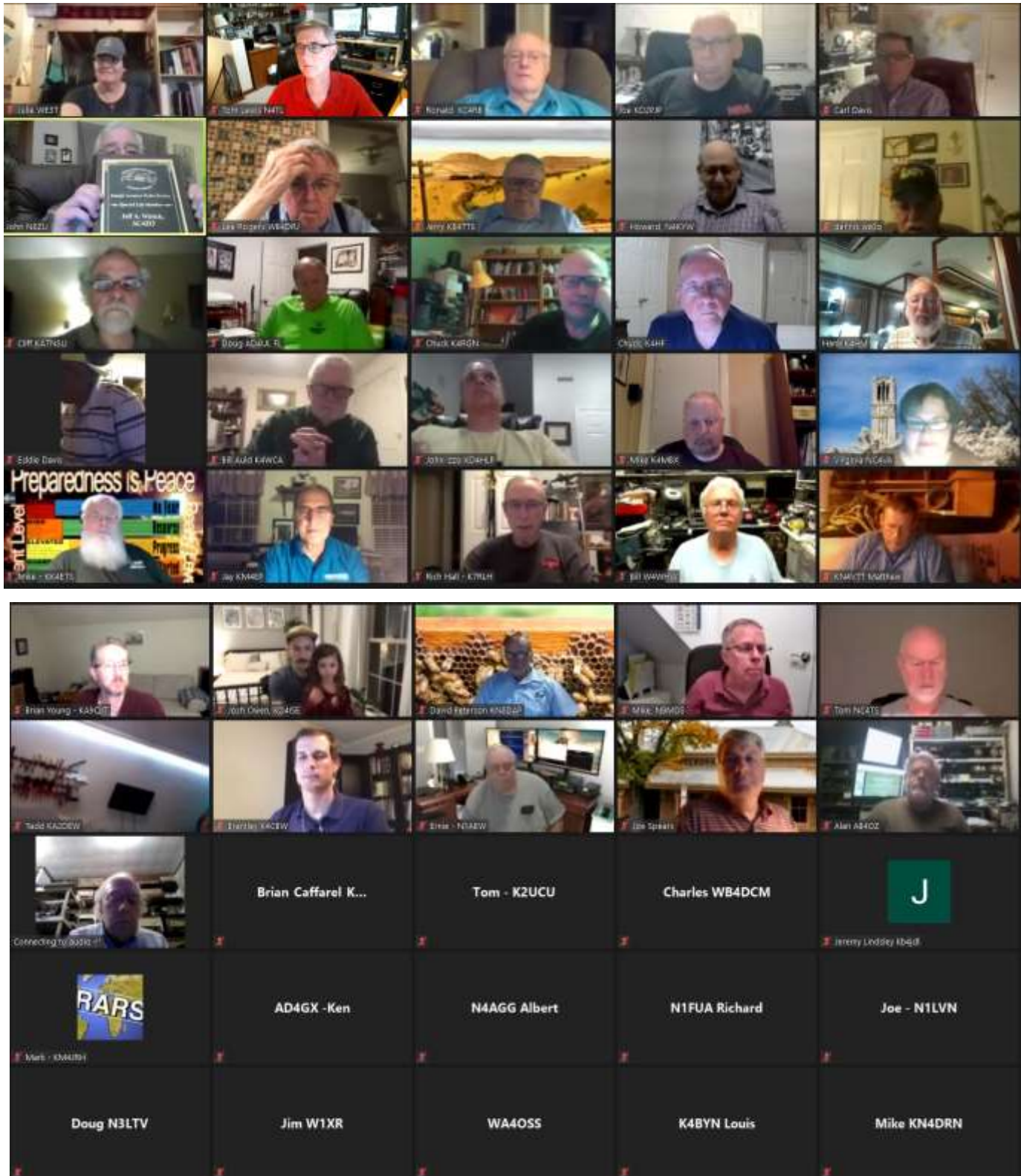
Check out our Facebook page ("IEEE MOVE")



Screen captures during the Zoom meeting

<https://www.rars.org>

November 10, 2020 RARS meeting, continued



A few screen captures during the Zoom meeting

Future RARS Meeting Topics

Titles, topics, and speakers subject to change.

Date	Topic	Presenter
12/8/2020	RARS Officers induction & Heil Sound Thanks to Marc, W4MPS, for putting me in touch with Bob Heil	Election committee & Dr. Bob Heil, K9EID
1/12/2021	Currently available handheld transceivers	Steve Molo, KI4KWR, GigaParts Brand Manager
2/9/2021	Homebrew building a transistor single conversion superhet receiver.	Alan Victor, W4AMV
3/9/2021	Awards, RARS Birthday Party & Bletchley Park presentation - History of the WWII Allied Code Breaking Centre Thanks to Bob Conder, K4RLC for setting this up.	Awards committee & Ray Burlingame-Goff, G4FON

The next few meeting of RARS will be held using Zoom at 7:30PM. Zoom is a conferencing application that runs on computers, tablets and phones. The meeting ID will be sent out to everyone via email.

Quick start guide for new Zoom users

https://support.zoom.us/hc/en-us/articles/360034967471-Quick-start-guide-for-new-users#h_b0c98dfa-d90f-486d-9617-71ab7b41a273

Zoom help center

<https://support.zoom.us/hc/en-us>

During all of our Zoom meetings please edit your name so your call is shown. Do a right click on your own image and choose rename. Add your call after your name. Thanks.

<https://www.rars.org>

RARS Birthdays

Ken	AC1BX	12/01
Charley	KE4QBW	12/01
Dave	KB8V	12/01
Rick	K4RLE	12/01
Smitty	K4ACS	12/02
Gary	KI4KKY	12/03
Glenn	KA4GLN	12/04
Chip	KN4LHD	12/05
Ronnie	W4RJF	12/06
Jen	KO4FJS	12/07
Neil	NR1Y	12/08
Virginia	NC4VA	12/09
Kenn	NE4Y	12/09
Ben	WO8H	12/10
Mike	WA4BPJ	12/11
Frank	KA2FWC	12/12
Burt	WB2IEL	12/12
Roger	KS4VX	12/12
Ralph	KF4NIR	12/14
Conner	KE4ZNS	12/15
Ralph	WB4EJJ	12/15
John	KM4MMA	12/16
Roger	W3EZR	12/18
Charles	KM4AMT	12/18
Mike	KN4GUN	12/19
Ronald	KC4RB	12/21
Mike	KK4YAQ	12/27
Mike	WD4MB	12/27
Jason	KK4TLZ	12/29
Darrell	W4CX	12/29
John	KO4HLP	12/30
Dick	KD4ISC	12/31
Bob	W4GIA	12/31
Gerry	K4GCJ	12/31

*Everyone is
welcome!*



Every Thursday there is a “**Taco Thursday**” Lunch at the Taco Bell, 7036 Knightdale Blvd, Newbern Ave. (Business 64) in Knightdale. We eat outside so bring a chair and Join the Tailgate Party. Weather permitting.

Once in a while a **Free Hamfest** is held at the Pleasant Valley Shopping Center. To find the next date go to the entry for AB4OZ in QRZ.COM. Alan posts the information there.

New Members

Brian Caffarel	KO4JAS
Stephen Haffly	KO4GOG
Donald Elsner	KS9F
Bruce Woodry	W8TWT
Rick Ward	KO4JMZ
John Poplawski	WB4UFO

RARSfest 2021 CANCELLED

The Raleigh Amateur Radio Society (RARS) and the RARSfest committee have made the difficult decision to cancel the 2021 RARSfest, due to increasing concerns regarding the resurgence of COVID-19. We hold the safety of our many guests and volunteers as our responsibility. Even if a facility were to become available, our concern is that it would be impossible to provide a safe venue for an event the size of RARSfest. We thank our many loyal guests, vendors, exhibitors and volunteers for their past patronage spanning nearly 50 years.

We look forward to seeing you on April 16, 2022 for the 48th RARSfest.

Interesting Websites and Information

New Yaesu FTdx10



The new Yaesu is on the ham radio store websites, but they don't say when it will start shipping. My guess is that it will compete with the ICOM IC-7300. More Yaesu FTdx10 Information is here.

<https://qrznow.com/wp-content/uploads/2020/10/FT DX10 preliminary data sheet 929c.pdf>

Upcoming DX operations.

<https://www.ng3k.com/Misc/adxo.html>

The scale of the universe 2

This was done in 2012 by two high school students, Cary and Michael Huang. Move the slider at the bottom to move in and out.

<https://htwins.net/scale2/>

<https://www.rars.org>

SKYWARN Recognition Day 2020

Virginia Enzor NC4VA

Central Carolina SKYWARN Emergency Coordinator

Weather Spotters get ready! SKYWARN Recognition Day 2020 officially takes place Saturday, December 5, from 0000-2400 UTC. During this 24-hour period, SKYWARN operators and NWS offices will contact other radio operators across the world.

This annual event was originally developed in 1999 by the National Weather Service and the American Radio Relay League to celebrate the contributions that SKYWARN™ amateur radio volunteers make to the NWS mission of protecting life and property. Amateur radio operators also provide vital communication between the NWS and emergency management when normal communications become inoperative.

Central Carolina SKYWARN and the Raleigh National Weather Service, operating under the call sign WX4NC, will join in the fun on Friday night (December 4) from 7:00 PM to 11:00 PM and Saturday from 9:00 AM to 5:00 PM, making contacts on the K4ITL 145.210 repeater, WB4TQD 146.88 repeater, the K4ITL 147.105, the K4ITL 147.135 repeater, the Carolina 440 UHF Link System, the W4BAD linked system, IRLP, and HF (80, 40, 20, 15, and 10 meters SSB). We will rotate through the repeaters so listen for us. To find the specific HF frequencies, look for WX4NC on <http://dxsummit.fi/#/>.

Radio operators will exchange names, call signs, locations, signal reports, and a 1 or 2-word weather report such as “windy”, “sunny”, or the current temperature.

If you wish to register for this event and receive a spotter SRD event number, please visit <https://www.weather.gov/crh/skywarnrecognition>. However, we still want your contact even if you do not register!

There will be a special event certificate from the National Weather Service! Certificates will be electronic and printable from <https://www.weather.gov/crh/skywarnrecognition>.

One change that 2020 brings is Covid-19; for health and safety reasons, we will be operating from home instead of the Raleigh NWS office. Also, the Raleigh NWS will be unable to accommodate visitors to its facility for tours this year.

Hope to get you in the log!



RARS Classifieds

Copied from <https://www.rars.org/classifieds.php>

The items below were listed within the last 30 days on the RARS website.

Yaesu FT-401D HF Station

Posted November 28th, 2020 by: K4HF

Contact: k4hf@arrl.net

This Yaesu HF Station includes the FT-401D 100 Watt Transceiver, FV-401 VFO and SP-400 matching speaker. Included is a Shure 444 Base Mike. 80 thru 10 meters, operates SSB & CW with filters. Tested and with manual and original boxes. Old but NEW museum quality condition. Asking \$495. Contact me preferably by e mail or (919) 872-6555 Thanks - Chuck

Misc Ham Radio Gear

Posted November 16th, 2020 by: K4HF

Contact: k4hf@arrl.net

ICE Model 309 Balanced Line Arrestor; 1KW PEP, 1.5-60MHz, 300-600 ohms - \$10

Generic Power Supply, 13.8VDC, 3-4 Amps - \$10

Kenwood H/T Alkaline Battery Cases, new, BT-11, BT-8, MBT-1, ea. \$2

AFCO Model RA-2-CB Antenna - \$10

Midland AM/FM/WX Alarm Radio A/c/Batt Powered - \$15

Radio Shack Atomic Radio Clock, Model 63-970, Batt/AC Powered - \$15

Tecsun S-2000 AM/FM/WX/Air/SW/SSB PLL Dual Conv. Receiver, w/manual, as new - \$175

Contact me by E Mail, preferred, or (919) 872-6555 Thanks, Chuck

RARS Classifieds continued

For Sale Yaesu FT-817 QRP and LDG Auto Tuner LDG Z-817 Middlesex, NC

Posted November 4th, 2020 by: AB4SL

Contact: AB4SL73@gmail.com

Yaesu FT-817 QRP Rig

LDG Z-817 Auto Tuner (matches FT-817)

Interconnecting cables Included

FT-817 Rechargeable Battery Pack 9.6v 1700 mAH NI-MH

FT-817 Anderson Power Pole Adapter

Bluetooth Adapter

Wolphilink PSK Android Adapter

FT-817 Pocket Reference

Printed Manuals

\$500 OBO (Sold as an entire group only)

Contact: Scott 919-280-8444

Palstar AT1500CV Antenna Tuner

Posted November 2nd, 2020 by: N4AGG

Contact: albertreynolds@juno.com

Palstar AT1500CV Antenna Tuner, 1500W, Very little use, none over 100W. \$300

Drake TR-7 Station

Posted November 2nd, 2020 by: N4AGG

Contact: albertreynolds@juno.com

Drake TR-7 station. One owner, purchased January 1980. Includes TR-7, PS-7 power supply, MN-7 matching network, MS-7 matching speaker, RV-7 remote VFO (bought used), Original manuals, Drake service manual, Shure 444D Microphone. Sold as package only. \$700 Pick-up in Raleigh.

RARS Board Meeting Minutes – October 20, 2020

Ridge Road Baptist Church

2011 Ridge Road

Raleigh, NC

* This meeting was conducted over Zoom. Next months meeting will be Zoom as well.

John Honeycutt opened the meeting at 7:00 PM.

The following were in attendance:

Members:

John Honeycutt - N8ZU

Tom Lewis - N4TL

Greg Seamster - KE4PAX

Mark Kilmer - KM4JRH

Chuck Littlewood - K4HF

Carl Davis - W8WZ

Hank Montgomery - K4HM

Tadd Torborg - KA2DEW

Alan Pitegoff - AB4OZ

Ken Latchum – AD4GX

A quorum was present and the previous meeting minutes were approved.

Chuck Littlewood indicated that the nominations were all set. He also noted that we would need to have someone take up the Facebook updates. Mark Kilmer suggested Bradley West and Carl Davis agreed. John Honeycutt brought up Martin Brossman.

RARS Board Meeting Minutes continued

Chuck brought up canceling RARS*fest* for 2021. Tadd questioned the disadvantage of canceling early. This discussion will be taken up at the November BoD meeting.

Chuck noted that the Florida and Richmond Ham fests have been canceled.

Officer/Committee Reports:

President: - John Honeycutt

John has been in contact with church and there are still no plans for opening it back up for meetings.

Treasurer: - Greg Seamster

Greg reviewed assets and expenses. Also noted some monies from donation to the club. SERA renewal has been submitted.

Vice President: - Tom Lewis

Meeting presentations are set up.

November – IEEE MOVE Truck

December – WWII Enigma Encryption [**editor's note, this has changed since the board of directors meeting, now its Heil Sound with Bob Heil**]

January – Hand Held Radios

February – Home Brewing

Education Director: Carl Davis

WCPSS does intend to hold the Spring Continuing Ed classes. Carl listed the club as participants, and the curriculum has been approved.

Repeater Chair: Chuck DeCourt

Alan noted he will visit the repeater sites with Dennis Mason and Richard Kroeger.

RARS Board Meeting Minutes continued

ARRL Liaison: Chuck Littlewood

Noted that between 1500 and 1700 people have responded to the FCC concerning the implementation of new licensing fees. Marv Hoffman wrote an article on the subjects of ARES and AUXCOM.

Director at Large: Tadd Torborg

Tadd has helped a new HAM get his equipment set up. John has had requests for people to be put in touch with an Elmer. Elmer requests should be sent to Tadd. Carl will also help out with any HF or CW requests.

Webmaster: Hank Montgomery

Hank indicated that both of the list servers are unreachable to some members. This seems to be due to users isp blocking the outgoing e-mails. Any members having this problem should contact Hank Montgomery..

VE Coordinators: Liz and Joe White

John Davis spoke to Joe about using a large meeting room and allowing only 5 persons to test by reservation. The church did not favor the idea.

General Discussions:

Action Items:

John Honeycutt:

- Contact Marv Hoffman about presenting in April.

Greg Seamster:

- Contact Jeff Wittich concerning the registration of the club repeaters.

Hank Montgomery:

- Add details of Mark Gibson's VE testing to the website.

RARS Board Meeting Minutes continued

New Business:

Greg Seamster:

Indicated that the SWL club has requested to use the club Zoom account to hold their meetings. This was approved by the board and has been set up.

John Honeycutt adjourned the meeting at 8:16 PM

Meeting Minutes submitted by Mark Kilmer, KM4JRH;
Secretary, Raleigh Amateur Radio Society

RARS Membership Meeting – November 10, 2020

* Ridge Road Baptist Church

2011 Ridge Road

Raleigh, NC

The normal club meeting space remains closed, due to the COVID-19, "Stay at Home Order." The meeting was conducted using the Zoom video conferencing software.

The meeting was opened by President John Honeycutt (N8ZU), at 7:30. John requested that all attendees add their callsign to their Zoom display name.

The Pledge of Allegiance was recited.

RARS Membership Meeting – Continued

Two members, Ms. Virginia Enzor (NC4VA) and Jeff Wittich (AC4ZO) were the recipients of the RARS “Special Lifetime Memberships”. John Honeycutt made the presentations.

A quorum was present. October minutes were approved.

Officer Reports:

President: - John Honeycutt

The RARS Board of Directors meeting will be held one week from today, at 7:00 PM. over Zoom. All members are invited. Contact John for a reservation to speak.

Vice President: - Tom Lewis

Next months meeting will be presented by Bob Heil on his inventions and products.

Exciter Editor: - Tom Lewis

Asked the group for any ideas or suggestions for future programs.

Treasurer: - Greg Seamster

Greg reviewed the budget and financial status. The club is up to 415 members. A donation of equipment, handled by Chuck Littlewood was made to the club. RARS tax return has been submitted.

Director and Committee Reports:

Nomination Committee Chair: Chuck Littlewood (K4HF)

John announced the club Board of Directors election and turned the direction over to Chuck, who presented the list of nominees and asked for any other nominations from the floor. None were made and the club voted to approve the current list of nominees.

RARS Membership Meeting – Continued

Additional Announcements:

Alan Pittegoft (AB4OZ):

Described the success of the November “AB4OZ Hamfest”. See AB4OZ QRZ page for links to videos and pictures. The next Hamfest will be held December 12th. Mark Gibson (N4MQU) will be offering license testing.

Taco Thursday is held at 11:00 and will be held at Wendy’s, next door, in the event Taco Bell is closed.

Alan cautioned everyone using APRS to turn this feature off when returning to repeater use.

John Honeycutt (N8ZU):

Presented the “Sixty-Four on Six-Four” award to Carl Davis (W8WZ), who expressed appreciation to those whose QSO’s helped make the award possible.

Tonight's Program:

Tom Lewis introduced the IEEE MOVE truck presentation made by Jay Diepenbrock (KM4EP).

John Honeycutt adjourned the meeting at 9:41 PM.

* Meeting minutes respectively submitted by Mark Kilmer (KM4JRH), Secretary, RARS.

NCPACKET - real time many-way keyboard chat over ham radio

For the past several years, many local hams have been putting together a ham-radio chat network based on the TARPN.net project. We're using VHF and UHF ham radios to link to each other and stretch the range of each station. Each ham station links to another ham station who then links to another, daisy-chaining our stations across a decently long distance. Each ham station has a tiny computer and one or more modem cards tied to one or more radios, to connect to one or more neighbors. It's pretty cheap for what it is, but it enables a lively community that keeps in touch via ham radio over a many-county range. We're in Alamance, Chatham, Orange, Durham, Wake, and Granville Counties at this time. We have a [wild] plan to connect across the state and to the several adjoining states. Everybody in range of the network is welcome to add on and to expand the network for yet more hams.

This weekend we had 27 stations connected to CHAT on the NCPACKET network. That was a new high. Getting network links to work and keeping them working is part of the challenge and the fun.

To join in the fun requires some cheap digital hardware and a simplex link with a pair of repurposed/cheap commercial radios between you and another linked participant. The digital hardware is a Raspberry PI and one or more TARPN NinoTNCs (\$35 + \$30). Every site is a full-featured packet node with BBS, CHAT, and both capability and permission to expand the network. No Internet! This is all ham radio, and it can be built by anybody in the ham community.

We have well over 100 miles of house-to-house links.

If you are familiar with what the 1990s called "packet radio", know that this system is linked to the fundamentals of the 1990s system. The TARPN project has yielded some improvements to that old scheme. NCPACKET's network is considerably quicker than the 1990s experience. The CHAT can be lively even with 50 or more connected stations. TARPN has brought us multiple helpful hardware elements and our local NC4FG, Fin, brought us TARPN-HOME, a gorgeous user interface. Attached to the article are two screenshots of the TARPN-HOME app from my station and an image of the new NCPACKET poster we've acquired to display at Hamfest.

The simplex link solution is one reason our network is growing so slowly, but it's the biggest reason our network is quicker than those in the past, and we're doing pretty well with 32 stations on the network this weekend, though only 27 had CHAT sessions running.

NCPACKET continued

We have a web page at ncpacket.net, an email reflector, and we'd love to have more participants. NCPACKET plans to be at the next AB4OZ Glenwood Ave Hamfest. Look for our blue banner. Visit us there and we'll show you what our home switch systems look like and possibly give you a show and tell about what it works like. Our large local group can work with you to acquire the appropriate parts without spending gross amounts of time or money.

73 de Tadd KA2DEW

The screenshot shows the TARPEN web interface. The top navigation bar includes 'Chat', 'Node', 'BBS', and 'Info'. The main content area is titled 'Chat Traffic' and displays a log of messages. The messages are timestamped and show a conversation between several users, including KA4VNC, KA2DEW, KA9QJT, and N3LTV. The chat log shows a discussion about a BBS, a user list, and a new device. On the right side, there is a 'SWITCH' toggle and a 'Mute' button. Below these is a list of 27 chatgers, each with a name and a status indicator (e.g., 2h, 7h, 4d). At the bottom, there is a 'Last Sent' field, a 'To Send' field, and a 'Commands' dropdown menu. The footer includes a 'Reboot App Server' button and a timestamp '11:31:46 PM | TARPEN | About | Help | Options | TARPEN Home V2.02'.

Chat Traffic

06:34 PM: KA4VNC Billy : I think he still has to be in aaron's user list though
06:35 PM: KA4VNC Billy : that's all I know
06:37 PM: KA4VNC Billy : hm I don't even see it on YOUR bbs so I'm not sure that I'm right yet
06:38 PM: KA2DEW Tadd : I have KA9QJT in my forwarding now
06:38 PM: KA2DEW Tadd : don't know if he has me as a BBS. I'll go check
06:39 PM: KA4VNC Billy : it's forwarding now
06:39 PM: KA4VNC Billy : to you anyway
06:41 PM: KA2DEW Tadd : ok. he doesn't have me as a BBS. I'm forwarding his mail to KN4ORB
06:43 PM: KA4VNC Billy : are you able to remote in and change that?
06:43 PM: KA2DEW Tadd : I don't know how to remotes in to a BBS. I think it is possible, but I don't know how
06:43 PM: KA4VNC Billy : I think I wanted to do that to aaronj node though and couldn't
06:43 PM: KA2DEW Tadd : Try sending one to KA9QJT again. It should get to KN4ORB at least.
06:44 PM: KA4VNC Billy : I just meant changing the user list via sysop
06:44 PM: KA4VNC Billy : ok
07:05 PM: KA4VNC Billy : They're on your bbs, it might just take a while for it to fwd automatically
07:49 PM: KA2DEW Tadd : looking now
07:50 PM: KA2DEW Tadd : I don't know why it didn't forward. I wasn't watching when you sent it.
07:51 PM: KA2DEW Tadd : Mino and I are plotting a new device. It'll be a NULL TNC which has two USB sockets. It will make both USB hosts think there is a NinoTNC attached and will be a point to point link between the hosts.
07:51 PM: KA2DEW Tadd : It does KISS out each direction.
08:13 PM: SM4XP : Jay *** Joined Chat. Topic General
08:28 PM: N3LTV Doug : ok - back
08:28 PM: KA2DEW Tadd : hi
08:28 PM: N3LTV Doug : Gonna start listening on 75m 3.87MHz
08:28 PM: KA2DEW Tadd : sounds good
08:34 PM: N3LTV Doug : Net in about 25 minutes
08:53 PM: KA2DEW Tadd : We are on 3.8775 megapuppies
09:10 PM: KA9QJT Brian : Surprised at the low number of check-ins. The turkey-induced slumbers must be continuing.
09:26 PM: N3LTV Doug : ok - well, that turned into a pretty interesting net afterall
09:26 PM: N3LTV Doug : was pretty quiet too!!
09:26 PM: N3LTV Doug : I guess we scared everyone off!!
09:27 PM: N3LTV Doug : Hope I get an email from Eric Shark - NO2S - letting us know what he thought
09:27 PM: KA9QJT Brian : Yes, thanks for running it, Doug. When I released the PIT, you were talking, so I guess I really faded. Solar flare effects perhaps.
09:28 PM: KA2DEW Tadd : thanks for running it Doug.
09:28 PM: KA2DEW Tadd : gotta break for late dinner. back on in a bit.
09:28 PM: KA9QJT Brian : Good night guys! Packers game to watch now.
09:28 PM: N3LTV Doug : oops - sorry about that Brian
09:29 PM: KA9QJT Brian : No problem Doug.
09:57 PM: KA2DEW David : Tadd whats the use case for the null modem?
09:59 PM: KA2DEW David : Is the purpose to connect two SPiAs without using Ethernet/WiFi?
10:25 PM: KA4VNC Billy : It would make troubleshooting easier
11:22 PM: KA2DEW Tadd : i am back
11:22 PM: KA2DEW Tadd : Yes. that is the purpose, David
11:23 PM: KA2DEW Tadd : but more importantly, it's to connect some host to a TARPEN node

Last Sent: but more importantly, it's to connect some host to a TARPEN node
To Send:
Commands: Choose Command

SWITCH: ☒ Mute

27 Chatters

- KA9QJT, Brian 2h
- KA2DEW, Tadd 7h
- K4RGN, Chuck 4d
- K4KDE, Kevin 4d
- NC4FG, Fin 2d
- AG4DB, Daniel 6d
- N8ZU, John 7d
- KK4VBE, Chris 3d
- KN4BTI, Mark 1d
- KW4KZ, Chuck 3d
- K4DBZ, David 1h
- KN4ORB, AaronL 1d
- N3LTV, Doug 2h
- K4CBW, Brantley 12d
- W4TTX, Bob 9d
- W4EJP, dave 6d
- W4GIA, BobR 14d
- KE4VNC, Billy 1h
- K4FD, Dan 18h
- KS4PE, Patrick 1d
- N7RYN, Ryan 11h
- W4CFO, DavidB 45d
- W1KES, Keith 1d
- KC2BXN, Ian 6d
- NC4AU, Larkin 10h
- KO4IBM, skye 3d
- KM4EP, Jay 3h

I'm Away I'm Back

Status Hint:
• = Available
• = Away
• = Idle

Reboot App Server 11:31:46 PM | TARPEN | About | Help | Options | TARPEN Home V2.02

NCPACKET continued

The screenshot shows the TARPNet web interface. At the top, there's a browser window with the address bar showing '192.168.0.205:8080/'. The page has a header with 'TARPNet' and 'TARPNet HOME'. Below the header, there are tabs for 'Chat', 'Node', 'BBS', and 'Info'. The 'BBS' tab is selected. Under the 'BBS' tab, there are buttons for 'Compose', 'Refresh', 'Kill', 'Reply', and 'Forward'. Below these buttons is a table of messages. The table has columns: Num, Date, Type, Status, Length, To, At, From, and Subject. Message #580 is highlighted. Below the table, there's a section for 'Message Content' showing the details of message #580.

Num	Date	Type	Status	Length	To	At	From	Subject
586	Today	Pers	Not Read/Sent	225	KA9QJT	@KA2DEW	KE4VNC	distant test
585	Today	Pers	Read	111	Me	@KA2DEW	K4RGN	success
584	Today	Pers	Read	127	Me	@KA2DEW	K4RGN	Tait low power
583	Today	Pers	Read	165	Me	@KA2DEW	K4RGN	8180
581	28-Nov	Pers	Read	97	Me	@KA2DEW	K4RGN	Tait installed and working
580	28-Nov	Pers	Read	232	Me	@KA2DEW	K4RGN	Re:Tait 446.475 radio in open box on porch
577	27-Nov	Pers	Read	426	Me	@KA2DEW	K4RGN	change in serial number
576	19-Nov	Pers	Read	111	Me	@KA2DEW	K4RGN	Re:Re:Re:Tait 40watt UHF radio photos
574	19-Nov	Pers	Read	162	Me	@KA2DEW	K4RGN	Re:Tait 40watt UHF radio photos
571	18-Nov	Pers	Read	206	Me	@KA2DEW	K4RGN	Tait power cables
570	16-Nov	Pers	Read	225	Me	@KA2DEW	K4RGN	Re:Re:Re:Re:Re:measurements on FIN

Message Content

From: K4RGN
To: KA2DEW
Type/Status: FY
Date/Time: 28-Nov 12:56Z
Bid: 140_K4RGN
Title: Re:Tait 446.475 radio in open box on porch

R:201128/1256Z 140@K4RGN. LinBPQ6.0.14

Got the box. Will try the radio after I finish my morning nets.
Didn't see your text message until late in the evening. Yes,
I have a set of Yox T6-T10, except that the T7 is missing.

[End of Message #580 from K4RGN]

Reboot App Server 11:34:01 PM | TARPNet | About | Help | Options | TARPNet Home V2.02

NCPACKET continued



TARPN

Terrestrial Amateur Radio Packet Network

NCPACKET is a North Carolina ham radio project built using the **TARPN** recipe, to create a wide area social data network.

We're building a fun hobby data network with solid Amateur Radio goals:

- fun;
- creativity;
- exploration;
- education;
- comradery;
- preparedness.

Every participant gets to learn and to operate in the network from a full featured and expandable 24/7 network switch, with electronic mail, and an always up round-table CHAT.

We started the project in 2014, first promoting the project outside a small community in 2016 only after the **TARPN** recipe was well baked. At the start we had a goal of producing a network plan which could be acquired, assembled and deployed by "every-ham".

Several years into the process we have our own software for CHAT and BBS/mail user interfaces, we have our own TNC called NinoTNC, and several other custom pieces built by our participants. Adding a station is half the cost and work as 3 years ago.

TARPN networks, including **NCPACKET**, are designed for Amateur fun with full access for all participants. **NCPACKET** makes real-time live conversations a primary function.

Using a novel network architecture our network permits full saturation without failure and allows for some adventurous hamming and experimentation.

Off the Grid Text Messaging – DIY data networks connect our houses entirely without Internet or commercial networks. With 35 **NCPACKET** stations (in late 2020) in 6 counties, our system can easily support all stations on the round table CHAT, at the same time, and with no congestion failures.

No Internet Required

No Internet Desired

No automatic gateways or wormholes exist. What we see is really ham radio.

The project as a whole is a challenge, but highly rewarding. This isn't a throwback. It's basic, it works well, and hams own it.

Visit us on the web: **NCPACKET.NET**

NCPacket_info_banner v006-11-21-2020

Carl Davis W8WZ Earns “Sixty-Four on Six-Four Award”

Virginia Enzor NC4VA

RARS Net Manager



Congratulations to Carl Davis W8WZ for earning the prestigious RARS “Sixty-Four on Six-Four Award” and receiving recognition for this achievement at the RARS zoom meeting on November 10, 2020! To earn this award, Carl had to make 64 unique station contacts on the 146.64 repeater.

Carl’s first contact for this award was made in June 2018 and his last contact was on October 11, 2020, proof that slow and steady wins the race.

We hope others will want to earn this fun award! It looks great displayed in the ham shack. For details, please visit <https://www.rars.org>.